IN THE CLAIMS

Please amend the claims as follows:

Claims 1-48 (Canceled).

Claim 49 (Currently Amended): A method according to Claim [[48]] 52, wherein the estimating of [[a]] the transmitted torque ~~value that balances~~ required to balance the vehicle on the slope includes calculating a static model of the vehicle on the slope from a measurement of an angle of inclination delivered by a slope sensor and knowledge of a given value representative of [[the]] a transmission speed.

Claim 50 (Currently Amended): A method according to Claim 49, wherein when the measurement of [[an]] the angle of inclination is less than a given threshold, the estimation of [[a]] the transmitted torque ~~value that balances~~ required to balance the vehicle on the slope is increased by a given value.

Claim 51 (Currently Amended): A method according to Claim 50, wherein the given value of increase of the estimation of [[a]] the transmitted torque ~~value that balances~~ required to balance the vehicle on the slope depends on the measurement of the angle of inclination.

Claim 52 (Currently Amended): A method ~~according to Claim 48~~ of assistance in starting a vehicle including a power unit and an automatic parking brake equipped with a mechanism of executing a command to release or deactivate the automatic parking brake, comprising, at least after one starting phase of the power unit:

estimating a transmitted torque value required to balance the vehicle on a slope;

executing in a loop an incremental calculation comprising:

reading an effective average torque value (Cme) associated with a dynamic stage of the power unit[[;]],

reading [[of]] an engine speed value (Wm)[[;]],

calculating a time derivative of the engine speed[[;]],

determining a moment of inertia of the power unit (Jmot) and calculating a load moment in a form of a product of the moment of inertia of the power unit by the time derivative of the engine speed[[;]], and

determining an estimation of ~~transmitted~~ torque ~~(ETT)~~ actually transmitted at a given moment (ECT) according to an equation ~~of the form~~: ECT = Cme – Jmot x dWm/dt,

wherein the loop is executed while the estimation of the torque actually transmitted is insufficient to surpass the estimation of the transmitted torque required to balance the vehicle on the slope; and

after the executing, producing a starting or deactivation command of the automatic parking brake.

Claim 53 (Currently Amended): A method according to Claim 52, further comprising resynchronizing the reading ~~of an~~ the effective average torque value and the reading ~~of an~~ the engine speed value, so that each pair of the values corresponds to a same time interval.

Claim 54 (Currently Amended): A method according to Claim 53, further comprising adding a predetermined delay, ~~preferably~~ equal to three periods of passage to a Top Dead Center of a thermal engine of the power unit, on a value of the resynchronization

of the estimated average torque value, to take into account ~~notably~~ a waiting time for filling of a manifold and for ignition.

Claim 55 (Currently Amended): A method according to Claim 53, wherein the resynchronization includes applying the resynchronization on derivative value (D_Wm) of the engine speed (Wm) between two samples separated by a resynchronization time ~~notably~~ according to equation: D_Wm = [Wm(8)-Wm(1)]/time, in which time determines [[the]] a resynchronization period and Wm(1) and Wm(8) values of beginning and end of a resynchronization period.

Claim 56 (Currently Amended): A method according to Claim 52, wherein the estimating [[a]] the transmitted torque required to balance the vehicle on the slope comprises:

comparing [[a]] the estimation of the transmitted torque ~~estimation value~~ required to balance the vehicle on the slope to a predetermined threshold value;

if the predetermined threshold value is exceeded, testing an output value of a counter, incremented on each transmitted torque estimation stage relative to [[a]] the predetermined threshold value,

if the predetermined threshold value is exceeded, producing a command authorizing release of the automatic parking brake.

Claim 57 (Currently Amended): A method according to Claim 56, wherein the estimating the transmitted torque ~~estimating~~ required to balance the vehicle on the slope further comprises executing a predetermined offset, so as to reduce a disturbing effect of starting and/or stopping of some secondary consumers of energy or power supplied by [[the]] a thermal engine, by carrying out the operation:

ECT_Corr_k = ECT_k + g(Consumers),

~~a prior determining~~ to determine a range in which the engine can be considered idling and a range during which an offset on the estimating the transmitted torque ~~estimation~~ can be executed.

Claim 58 (Currently Amended): A method according to Claim 57, wherein the executing [[an]] the offset is carried out following a test in a course of which four conditions are combined:

Wm [[<]] $\leq$ Smax_Wm_Idle,

ABS(D_Wm) [[<]] $\leq$ Smax_D_M_idle,

THETA_Acc [[<]] $\leq$ Smax_acc_idle,

D_Acc [[= =]] $\leq$ 0,

conditions under which:

Smax_Wm_idle represents a threshold value below which the engine speed indicates that the engine is at rest or idling;

Smax_D_M_idle represents a threshold value below which absolute value ABS(D_Wm) of the time derivative of the engine speed D_Wm indicates that the engine is at rest or idling;

Smax_acc_idle represents a threshold value below which degree of depression of the accelerator pedal THETA_Acc indicates that the engine is at rest or idling;

D_Acc represents time derivative of the degree of depression THETA_Acc of the accelerator pedal, which is negative when the driver lifts a foot from the accelerator pedal;

so that, if the test is negative, the control returns to initialization of a counter, the power unit being deemed unconnected to [[the]] driving wheels of the vehicle;

and so that, if the test is positive, the control ~~passes to a test to look~~ determines whether the counter is below a predetermined threshold value;

so that if the ~~test is positive~~ counter is below the predetermined threshold value, an initially zero offset value, when the counter is ~~itself~~ initialized at the stage, is increased by [[the]] a value of the current estimation of the transmitted torque;

then, the value of the counter ~~being~~ is incremented by one step, and the control ~~returning~~ is returned to the ~~testing~~ test; and

so that, if the ~~test is negative~~ counter is not below the predetermined threshold value, the offset value is transmitted to a routine of calculation of an offset value of the transmitted torque estimation, an offset value noted offset_ECT which is equal to [[the]] a ratio of the offset value calculated [[on]] to the value CPTR_threshold of the counter.

Claim 59 (Currently Amended): A method according to claim [[48]] 52, further comprising producing a driver activity report, so that release of the automatic parking brake will be refused in case of lifting of [[the]] an accelerator pedal of the vehicle.

Claim 60 (Canceled).

Claim 61 (Currently Amended): A method ~~according to Claim 60,~~ of assistance in starting a vehicle including a power unit and an automatic parking brake equipped with a mechanism of executing a command to release or deactivate the automatic parking brake, comprising, at least after one starting phase of the power unit:

estimating a transmitted torque value required to balance the vehicle on a slope;

executing in a loop an incremental calculation of an estimation of torque actually transmitted at a given moment, while the estimation of the torque really transmitted is

insufficient to surpass the estimation of the transmitted torque required to balance the vehicle on the slope;

after the executing, producing a starting or deactivation command of the automatic parking brake; and

detecting a release demand when the power unit is not engaged,

wherein the detecting includes, without using any sensor of depression of [[the]] a clutch pedal of the vehicle, detecting [[the]] an engaged state by two maps of the estimation of torque transmitted as a function of [[the]] a degree of depression of [[the]] an accelerator pedal of the vehicle respectively established when [[the]] wheels of the vehicle are engaged and when the wheels are disengaged, and comparing the value of the estimation of torque transmitted to each ~~of the~~ map ~~values~~ value addressed by measurement of the degree of depression of the accelerator pedal to produce, if comparison to the first map is positive, a characteristic report of a disengaged state, and if the comparison to the second map is positive, to produce a characteristic report of an engaged state.

Claim 62 (Canceled).

Claim 63 (Currently Amended): A method ~~according to claim 48, further comprising~~ of assistance in starting a vehicle including a power unit and an automatic parking brake equipped with a mechanism of executing a command to release or deactivate the automatic parking brake, comprising, at least after one starting phase of the power unit:

estimating a transmitted torque value required to balance the vehicle on a slope;

executing in a loop an incremental calculation of an estimation of torque actually transmitted at a given moment, while the estimation of the torque really transmitted is

insufficient to surpass the estimation of the transmitted torque required to balance the vehicle on the slope;

after the executing, producing a starting or deactivation command of the automatic parking brake; and

detecting idling speed, including:

comparing [[the]] information on estimated engine torque (Cme) to two functions of estimation of the idling speed in rotation with an estimation of positive transmitted torque fp() and in rotation with an estimation of negative transmitted torque fn()[[;]],

applying to the function fp() an idle gain applied on the estimated engine torque, an offset on the estimated engine torque value in an idle position, and the estimated engine torque to produce ~~a priori~~ an idling speed value in rotation with an estimation of positive transmitted torque[[;]],

applying to the function fn() an idle gain applied on the estimated engine torque, an offset on the estimated engine torque value in an idle position, and the estimated engine torque to produce ~~a priori~~ an idling speed value in rotation with an estimation of negative transmitted torque[[;]],

comparing [[the]] an engine speed value to determine whether a positive or negative idling speed is present, on rotation with an estimation of positive transmitted torque or with an estimation of negative transmitted torque[[;]], and

authorizing release of the automatic parking brake only if no idling speed is detected.

Claim 64 (Currently Amended): A method according to claim [[48]] 52, further comprising saturation detection of [[the]] a high-speed thermal engine of the vehicle, so that release of the automatic parking brake is prevented on saturation.

Claim 65 (Currently Amended): A method ~~according to claim 48, further comprising~~ of assistance in starting a vehicle including a power unit and an automatic parking brake equipped with a mechanism of executing a command to release or deactivate the automatic parking brake, comprising, at least after one starting phase of the power unit:

estimating a transmitted torque value required to balance the vehicle on a slope;

executing in a loop an incremental calculation of an estimation of torque actually transmitted at a given moment, while the estimation of the torque really transmitted is insufficient to surpass the estimation of the transmitted torque required to balance the vehicle on the slope;

after the executing, producing a starting or deactivation command of the automatic parking brake; and

producing a horizontal starting operation without a threshold on pressing [[the]] an accelerator pedal of the vehicle, including:

producing a parking brake release command on sole determination that the ~~transmitted~~ estimation of the torque ~~estimation~~ actually transmitted is higher than [[the]] a predetermined threshold ~~and, in particular,~~ and without testing [[a]] the threshold on pressing the accelerator pedal[[;]],

initializing a starting state variable on starting up the vehicle, to indicate that the accelerator pedal has not yet been depressed, to 0[[;]],

reading a rest variable representative of [[the]] a state of rest of [[the]] an engine[[;]] of the vehicle,

treating a stabilizing state variable so that [[it]] the variable stays at 1 as soon as the accelerator has been pressed and until an idle variable returns to 1[[;]],

and then authorizing horizontal starting when the starting state variable equals 0 and testing that the ~~transmitted~~ estimation of the torque ~~estimation~~ actually transmitted is higher

than [[a]] the predetermined threshold value to authorize release of the automatic parking brake and thus ensure starting of the vehicle keeping the vehicle in a certain range of acceleration.

Claim 66 (Previously Presented): A method according to Claim 65, further comprising extending the horizontal starting operation to a descending starting operation in first gear.

Claim 67 (Previously Presented): A method according to Claim 65, further comprising extending the horizontal starting operation to a descending starting operation in reverse gear.

Claim 68 (Currently Amended): A method according to claim [[48]] 52, further comprising an excess pitch detecting for preventing release of the automatic parking brake in a starting situation if the pitch of the vehicle exceeds a certain predetermined threshold.

Claim 69 (Currently Amended): A method ~~according to claim 48, further comprising~~ of assistance in starting a vehicle including a power unit and an automatic parking brake equipped with a mechanism of executing a command to release or deactivate the automatic parking brake, comprising, at least after one starting phase of the power unit:

estimating a transmitted torque value required to balance the vehicle on a slope;

executing in a loop an incremental calculation of an estimation of torque actually transmitted at a given moment, while the estimation of the torque really transmitted is insufficient to surpass the estimation of the transmitted torque required to balance the vehicle on the slope;

after the executing, producing a starting or deactivation command of the automatic parking brake; and

determining a term of anticipation on the release command of the automatic parking brake dependent on predetermined anticipation values, which includes, upon elaboration of the automatic parking brake release command, also executing measuring a degree of depression of [[the]] an accelerator pedal of the vehicle, and then measuring a time derivative of [[the]] a signal of the degree of depression, and comparing ~~that~~ the instantaneous derivative value with a predetermined threshold, so that if the time ~~derivation of variation~~ derivative of the signal of the degree of depression is greater than the predetermined threshold value, the incrementation loop of the ~~transmitted~~ estimation of the torque ~~estimation value~~ actually transmitted is interrupted before the ~~test is real~~ estimation of the torque actually transmitted is sufficient to surpass the estimation of the torque required to balance the vehicle on the slop, to produce in advance the automatic parking brake release command.

Claims 70-94 (Canceled).